U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4, SCIENCE and ECOSYSTEM SUPPORT DIVISION
ATHENS, GEORGIA 30605

17 7 0001

4SESD-EIB

MAR 1 5 2002

SITE: Browns Dump
BREAK: 17.7
OTHER:

MEMORANDUM

SUBJECT: Final Report: Garden Sampling, Jacksonville Ash Sites, Jacksonville, Florida.
SESD Project No. 02-0254

FROM: Fred Sloan
Superfund and Air Section

THRU: Archie Lee, Chief
Superfund and Air Section

To: Joe Alfano, RPM
South Site Management Branch
Waste Management Division

Introduction

The Environmental Investigations Branch (EIB), Superfund and Air Section (SAS) has collected soil and vegetative samples from three small gardens as part of the ongoing investigation into the subject sites. The samples were collected January 15, 2002. Access to the garden plots was arranged by Joe Alfano, who was present during the sampling activities.

Methodology

Twelve samples were collected, six soil and six vegetable (collards and/or mustard greens). The samples were paired as follows: GARD-01, 02; GARD-03, 04; GARD-05, 06; GARD-07, 08; GARD-09, 10; GARD-11, 12. Each pair consisted of a vegetable and corresponding soil sample.

Samples were analyzed for lead, arsenic, antimony, and carcinogenic PAHs: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. Analytical results are presented in attached Tables 1, 2, and 3. The raw data sheets are also attached.

Samples were collected, handled, and analyzed in accordance with the *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual* (EISOPQAM, (May 1996, with 1997 revisions), and the *Analytical Support Branch Operations and Quality Control Manual* (ASBOQCM, July 2001). Site specific sampling was performed in accordance with the approved study plan, with the following change: Soil samples were collected from as near the base of the sampled plants as possible, to allow for better correlation with plant results.

10224285

Results

Two of the gardens sampled had visible ash present ("Garden 1" and "Garden 2"). The third garden was selected from an area believed to be free of ash and no ash was observed in this garden ("Garden 3"). Samples GARD-01 through GARD-04 were collected from "Garden 1". Samples GARD-05 through GARD-08 were collected from "Garden 2". Samples GARD-09 through GARD-12 were collected from "Garden 3".

Gardens 1 and 2 had concentrations of PAHs in soil ranging from 78J (J - estimated value) ug/kg in GARD-02 to 720J ug/kg in GARD-08. Soil PAHs concentrations were lower in Garden 3, ranging from17J ug/kg in GARD-10 to 170J ug/kg in GARD-12. No PAHs were detected in any of the vegetable samples.

Gardens 1 and 2 had soil antimony concentrations ranging from 1.9A (A - average value) mg/kg in GARD-02 to 38 mg/kg in GARD-06, soil arsenic concentrations ranging from 2.5A mg/kg in GARD-02 to 18 mg/kg in GARD-06, and soil lead concentrations ranging from 490A mg/kg in GARD-02 to 4400 mg/kg in GARD-08. Garden 3 soil metals concentrations were lower, with soil antimony concentrations of 0.29 mg/kg in GARD-10 and 0.32 mg/kg in GARD-12, soil arsenic concentrations of 1.3 in GARD-10 and 0.8 mg/kg in GARD-12, and soil lead concentrations of 61 mg/kg in GARD-10 and 73 mg/kg in GARD-12. Antimony and arsenic were not detected in any of the vegetable samples. Lead was detected in all vegetable samples, with concentrations in Gardens 1 and 2 ranging from 0.11A mg/kg in GARD-01 to 0.28 mg/kg in GARD-07. Vegetable lead concentrations in Garden 3 were 0.038 mg/kg in GARD-09 and 0.089 mg/kg in GARD-12.

Conclusions

Lead was the only analyte detected in vegetable samples collected during this investigation. It must be noted that it is not certain if the reported lead was actually taken up by the plants or if small soil particles containing lead were adhering to the plants. All plant materials were thoroughly washed prior to analysis, but minute particles may have remained.

While concentrations did vary, it was noted that analyte concentrations were greater in gardens with visible ash present, which is to be expected.

If you have any questions or comments, please call me at 706-355-8617, or email at sloan.fred@epa.gov.

Attachments

cc: Joanne Benante
Wes Hardegree

Table 1
Analytical Results for Soil PAHs
Jacksonville Garden Sampling
Jacksonville Ash Sites
Jacksonville, Florida

		GARD-02	GARD-04	GARD-06	GARD-08	GARD-10	GARD-12
		1050	1105	1150	1200	1430	1445
		01/15/2002	01/15/2002	01/15/2002	01/15/2002	01/15/2002	01/15/2002
BENZO(A)ANTHRACENE	UG/KG	170 J	480 J	430 J	500 J	85 J	110 J
BENZO(B)FLUORANTHENE	UG/KG	280 J	710 J	680 J	720 J	120 J	170 J
BENZO(K)FLUORANTHENE	UG/KG	78 J	240 J	220 J	260 J	17 J	56 J
BENZO-A-PYRENE	UG/KG	220 J	540 J	600 J	650 J	130 J	150 J
CHRYSENE	UG/KG	150 J	450 J	550 J	530 J	73 J	95 J
DIBENZO(A,H)ANTHRACENE	UG/KG	200 J	350 J	430 J	430 J	110 J	120 J
INDENO (1,2,3-CD) PYRENE	UG/KG	180 J	340 J	430 J	420 J	97 J	110 J

Data Qualifiers

J-Estimated value.

Table 2
Analytical Results for Soil Metals
Jacksonville Garden Sampling
Jacksonville Ash Sites
Jacksonville, Florida

		GARD-02		GARD-04	GARD-06	GARD-08	GARD-10	GARD-12
		1050		1105	1150	1200	1430	1445
		01/15/2002		01/15/2002	01/15/2002	01/15/2002	01/15/2002	01/15/2002
ANTIMONY	MG/KG	1.9	A	3.1	38	38	0.29	0.32
ARSENIC	MG/KG	2.5	A	8.3	18	16	1.3	0.8
LEAD	MG/KG	490	AJ	500	3000	4400	61	73

Data Qualifiers

A-Average value. J-Estimated value.

Table 3
Analytical Results for Plant Metals
Jacksonville Garden Sampling
Jacksonville Ash Sites
Jacksonville, Florida

	GARD-01		GARD-03	GARD-05	GARD-07	GARD-09	GARD-11
	1045		1100	1145	1155	1425	1440
	01/15/2002		01/15/2002	01/15/2002	01/15/2002	01/15/2002	01/15/2002
LEAD MG/KG	0.11	A	0.16	0.2	0.28	0.038	0.089

Data Qualifiers

A-Average value.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-01 /
Media: VEGETATION

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 10:45
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
.28U	MG/KG	BENZO(A)ANTHRACENE
.28U	MG/KG	CHRYSENE
.28U	MG/KG	BENZO(B)FLUORANTHENE
.28U	MG/KG	BENZO(K)FLUORANTHENE
.28U	MG/KG	BENZO-A-PYRENE
.28U	MG/KG	INDENO (1,2,3-CD) PYRENE
.28U	MG/KG	DIBENZO(A,H)ANTHRACENE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
<-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Amended Date: 02/21/2002 07:47

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-01 /
Media: VEGETATION

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 10:45
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.024U	MG/KG	ARSENIC
0.11A	MG/KG	LEAD
0.012UJ	MG/KG	ANTIMONY

SB RESULTS MAY BE BIASED LOW DUE TO VOLATILIZATION DURING SAMPLE PREP

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-02 /
Media: SURFACE SOIL (0" - 12")

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 10:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
170J	UG/KG	BENZO(A)ANTHRACENE
150J	UG/KG	CHRYSENE
280J	UG/KG	BENZO(B)FLUORANTHENE
78J	UG/KG	BENZO(K)FLUORANTHENE
220J	UG/KG	BENZO-A-PYRENE
180J	UG/KG	INDENO (1,2,3-CD) PYRENE
200J	UG/KG	DIBENZO(A,H)ANTHRACENE

177 0008

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
<-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-02 /
Media: SURFACE SOIL (0" - 12")

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 10:50
Ending:

RESULTS	UNITS	ANALYTE
2.5A	MG/KG	ARSENIC
490AJ	MG/KG	LEAD
1.9A	MG/KG	ANTIMONY

MATRIX SPIKE PRECISION OUTSIDE METHOD CONTROL LIMITS FOR PB.

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample ( ) FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-03 /
Media: VEGETATION

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:00
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
.29U	MG/KG	BENZO(A)ANTHRACENE
.29U	MG/KG	CHRYSENE
.29U	MG/KG	BENZO(B)FLUORANTHENE
.29U	MG/KG	BENZO(K)FLUORANTHENE
.29U	MG/KG	BENZO-A-PYRENE
.29U	MG/KG	INDENO (1,2,3-CD) PYRENE
.29U	MG/KG	DIBENZO(A,H)ANTHRACENE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-03 /
Media: VEGETATION

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:00
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.025U	MG/KG	ARSENIC
0.16	MG/KG	LEAD
0.012UJ	MG/KG	ANTIMONY

17 7 3011

SB RESULTS MAY BE BIASED LOW DUE TO VOLATILIZATION DURING SAMPLE PREP

-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-04 /
Media: SURFACE SOIL (0" - 12")

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:05
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
480J	UG/KG	BENZO(A)ANTHRACENE
450J	UG/KG	CHRYSENE
710J	UG/KG	BENZO(B)FLUORANTHENE
240J	UG/KG	BENZO(K)FLUORANTHENE
540J	UG/KG	BENZO-A-PYRENE
340J	UG/KG	INDENO (1,2,3-CD) PYRENE
350J	UG/KG	DIBENZO(A,H)ANTHRACENE

177 0012

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-04 /
Media: SURFACE SOIL (0" - 12")

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:05
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
8.3	MG/KG	ARSENIC
500	MG/KG	LEAD
3.1	MG/KG	ANTIMONY

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-05 /
Media: VEGETATION

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:45
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
.056U	MG/KG	BENZO(A)ANTHRACENE
.056U	MG/KG	CHRYSENE
.056U	MG/KG	BENZO(B)FLUORANTHENE
.056U	MG/KG	BENZO(K)FLUORANTHENE
.056U	MG/KG	BENZO-A-PYRENE
.056U	MG/KG	INDENO (1,2,3-CD) PYRENE
.056U	MG/KG	DIBENZO(A,H)ANTHRACENE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Amended Date: 02/21/200[illegible]7:47

Sample [illegible] FY 2002 Project: 02-0254

SPECIFIED TESTS

Facility: Jacksonville Ash. Jacksonville, FL

Program: SF

Id/Station: GARD-05 /

Media: VEGETATION

Produced by: Wasko, Mike

Requestor: Joe Alfano

Project Leader: FSLOAN

Beginning: 01/15/2002 11:45

Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.024U	MG/KG	ARSENIC
0.20	MG/KG	LEAD
0.012UJ	MG/KG	ANTIMONY

SB RESULTS MAY BE BIASED LOW DUE TO VOLATILIZATION DURING SAMPLE PREP

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-06 /
Media: SURFACE SOIL (0" - 12")

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
430J	UG/KG	BENZO(A)ANTHRACENE
550J	UG/KG	CHRYSENE
680J	UG/KG	BENZO(B)FLUORANTHENE
220J	UG/KG	BENZO(K)FLUORANTHENE
600J	UG/KG	BENZO-A-PYRENE
430J	UG/KG	INDENO (1,2,3-CD) PYRENE
430J	UG/KG	DIBENZO(A,H)ANTHRACENE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-06 /
Media: SURFACE SOIL (0" - 12")

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
18	MG/KG	ARSENIC
3000	MG/KG	LEAD
38	MG/KG	ANTIMONY

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
<-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 216 Y 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-07 /
Media: VEGETATION

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:55
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
.055U	MG/KG	BENZO(A)ANTHRACENE
.055U	MG/KG	CHRYSENE
.055U	MG/KG	BENZO(B)FLUORANTHENE
.055U	MG/KG	BENZO(K)FLUORANTHENE
.055U	MG/KG	BENZO-A-PYRENE
.055U	MG/KG	INDENO (1,2,3-CD) PYRENE
.055U	MG/KG	DIBENZO(A,H)ANTHRACENE

average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-07 /
Media: VEGETATION

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 11:55
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.025U	MG/KG	ARSENIC
0.28	MG/KG	LEAD
0.012UJ	MG/KG	ANTIMONY

SB RESULTS MAY BE BIASED LOW DUE TO VOLATILIZATION DURING SAMPLE PREP

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-08 /
Media: SURFACE SOIL (0" - 12")

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 12:00
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
500J	UG/KG	BENZO(A)ANTHRACENE
530J	UG/KG	CHRYSENE
720J	UG/KG	BENZO(B)FLUORANTHENE
260J	UG/KG	BENZO(K)FLUORANTHENE
650J	UG/KG	BENZO-A-PYRENE
420J	UG/KG	INDENO (1,2,3-CD) PYRENE
430J	UG/KG	DIBENZO(A,H)ANTHRACENE

17 7 0020

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
<-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 21 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-08 /
Media: SURFACE SOIL (0" - 12")

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 12:00
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
16	MG/KG	ARSENIC
4400	MG/KG	LEAD
38	MG/KG	ANTIMONY

17 7 0021

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample [redacted] FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-09 /
Media: VEGETATION

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 14:25
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
.29U	MG/KG	BENZO(A)ANTHRACENE
.29U	MG/KG	CHRYSENE
.29U	MG/KG	BENZO(B)FLUORANTHENE
.29U	MG/KG	BENZO(K)FLUORANTHENE
.29U	MG/KG	BENZO-A-PYRENE
.29U	MG/KG	INDENO (1,2,3-CD) PYRENE
.29U	MG/KG	DIBENZO(A,H)ANTHRACENE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-09 /
Media: VEGETATION

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 14:25
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.025U	MG/KG	ARSENIC
0.038	MG/KG	LEAD
0.012UJ	MG/KG	ANTIMONY

SB RESULTS MAY BE BIASED LOW DUE TO VOLATILIZATION DURING SAMPLE PREP

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254

SPECIFIED TESTS

Facility: Jacksonville Ash Jacksohville, FL
Program: SF
Id/Station: GARD-10 /
Media: SURFACE SOIL (0" - 12")

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginnlng: 01/15/2002 14:30
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
85J	UG/KG	BENZO(A)ANTHRACENE
73J	UG/KG	CHRYSENE
120J	UG/KG	BENZO(B)FLUORANTHENE
17J	UG/KG	BENZO(K)FLUORANTHENE
130J	UG/KG	BENZO-A-PYRENE
97J	UG/KG	INDENO (1,2,3-CD) PYRENE
110J	UG/KG	DIBENZO(A,H)ANTHRACENE

1777 0024

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 21 FY 2002 Project: 02-0254

SPECIFIED TESTS

Facility: Jacksonville Ash Jacksonville, FL

Program: SF

Id/Station: GARD-10 /

Media: SURFACE SOIL (0" - 12")

Produced by: Wasko, Mike

Requestor: Joe Alfano

Project Leader: FSLOAN

Beginning: 01/15/2002 14:30

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
1.3	MG/KG	ARSENIC
61	MG/KG	LEAD
0.29	MG/KG	ANTIMONY

4 7 7 0025

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-11 /
Media: VEGETATION

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 14:40
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
.045U	MG/KG	BENZO(A)ANTHRACENE
.045U	MG/KG	CHRYSENE
.045U	MG/KG	BENZO(B)FLUORANTHENE
.045U	MG/KG	BENZO(K)FLUORANTHENE
.045U	MG/KG	BENZO-A-PYRENE
.045U	MG/KG	INDENO (1,2,3-CD) PYRENE
.045U	MG/KG	DIBENZO(A,H)ANTHRACENE

17 7 0026

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2(FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-11 /
Media: VEGETATION

Produced by: Wasko, Mike
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 14:40
Ending:

DATA REPORTED ON WET WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.025U	MG/KG	ARSENIC
0.089	MG/KG	LEAD
0.012UJ	MG/KG	ANTIMONY

17 7 0027

SB RESULTS MAY BE BIASED LOW DUE TO VOLATILIZATION DURING SAMPLE PREP

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 2 FY 2002 Project: 02-0254
SPECIFIED TESTS
Facility: Jacksonville Ash Jacksonville, FL
Program: SF
Id/Station: GARD-12 /
Media: SURFACE SOIL (0" - 12")

Produced by: Revell, Dennis
Requestor: Joe Alfano
Project Leader: FSLOAN
Beginning: 01/15/2002 14:45
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
110J	UG/KG	BENZO(A)ANTHRACENE
95J	UG/KG	CHRYSENE
170J	UG/KG	BENZO(B)FLUORANTHENE
56J	UG/KG	BENZO(K)FLUORANTHENE
150J	UG/KG	BENZO-A-PYRENE
110J	UG/KG	INDENO (1,2,3-CD) PYRENE
120J	UG/KG	DIBENZO(A,H)ANTHRACENE

17 7 028

A-average value. NA-not analyzed. NAI-Interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample FY 2002 Project: 02-0254

SPECIFIED TESTS

Facility: Jacksonville Ash Jacksonville, FL

Program: SF

Id/Station: GARD-12 /

Media: SURFACE SOIL (0" - 12")

Produced by: Wasko, Mike

Requestor: Joe Alfano

Project Leader: FSLOAN

Beginning: 01/15/2002 14:45

Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
0.80	MG/KG	ARSENIC
73	MG/KG	LEAD
0.32	MG/KG	ANTIMONY

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.